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United States Patent [19]
Krivoshein et al.

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[54] **PROCESS CONTROL SYSTEM INCLUDING
AUTOMATIC SENSING AND AUTOMATIC
CONFIGURATION OF DEVICES**

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364/147; 395/200.51; 395/200.52**

[58] **Field of Search** **395/284, 651-653,
395/823, 828-832, 834-837, 839, 200.5,
200.51, 200.52, 200.58; 364/131, 138, 146,
147**

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[57] **ABSTRACT**

A digital control system with a predetermined configuration automatically senses the connection to a network of a digital device that is not included in the predetermined configuration. The digital device is assigned temporary address information and placed in a temporary state, called a standby state, in which the digital device supplies information to the digital control system allowing a user to access the digital device including access of device information and configuration parameters. Using the device information and configuration parameters, a user selectively commissions the digital device by assigning a physical device tag, a device address, and a device identification, and installing a control strategy to the digital device, thereby placing the digital device in an operational state in communication with the digital control system. In the standby state, a user interrogates to determine the type of device that is attached, determines the role of the device in the context of the digital control system, assigns a physical device tag that assigns the determined role to the device, and verifies connection of the device to the network. Also in the standby state, the user initiates other applications applied to the device, including calibration of the device and configuring the device within the overall control scheme of the digital control system.

22 Claims, 18 Drawing Sheets